

In the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims

Claim 1 (Currently amended): A camera control system comprising:

first image pickup device which picks up an image of an object through a wide-angle lens having distortion, to output ~~a moving image~~ frame images which ~~is~~ are generated within a predetermined fixed area consecutively in a first interval;

image processing device which performs projective transformation processing to correct distortion of the ~~moving image~~ frame images outputted from said first image pickup device;

second image pickup device having no distortion, which outputs ~~a moving image~~ frame images which are generated consecutively in a second interval which is shorter than the first interval;

display device which displays the ~~moving image~~ frame images processed by said image processing device, and which superimposes and displays, on the displayed ~~moving image~~ frame images, a rectangular frame indicative of an image-pickup area of said second image pickup device, and displays the ~~moving image~~ frame images from said second image pickup device together with the processed ~~moving image~~ frame images and the rectangular frame;

designating device which designates a desired rectangular area within the ~~moving image~~ frame images displayed by said display device;

control device which controls at least one of panning, tilting and zooming of said

second image pickup device in such a way as to pick up an image corresponding to the rectangular area designated by said designating device, and;

wherein, a frame image ~~included in the processed moving image~~ of the first image pickup device to be displayed by said display device is generated independently of the first interval, in response that ~~the desired rectangular area is designated~~ said control device completes the control of said second image pickup device in accordance with the designation by said designating device.

Claim 2 (Currently amended): A camera control system according to claim 1, wherein said display device displays, on a common screen, the ~~moving image processed~~ frame images by said image processing device and the ~~moving image~~ frame images outputted from said second image pickup device.

Claim 3 (Previously presented): A camera control system according to claim 1, wherein a position and a size of the rectangular frame displayed by said display device are determined on the basis of a parameter outputted from said second image pickup device.

Claim 4 (Cancelled).

Claim 5 (Currently amended): A camera control system according to claim 1, wherein said first image pickup device includes a plurality of image pickup devices, and said image processing device processes and combines ~~moving images~~ groups of frame images outputted from said plurality of image pickup devices into one ~~moving image~~ group of frame images.

Claim 6 (Previously presented): A camera control system according to claim 1, further comprising:

an optical member for making object light incident thereon; and

an optical splitting member for splitting the object light coming through said optical

member into two light beams and for making the two split light beams incident on said first image pickup device and said second image pickup device, respectively, so that image-pickup optical axes of said first image pickup device and said second image pickup device coincide with each other.

Claim 7 (Previously presented): A camera control system according to claim 1, wherein said image processing device executes an affine transformation on the basis of information on an image-pickup direction of said first image pickup device.

Claim 8 (Previously presented): A camera control system according to claim 1, wherein said wide-angle lens having distortion for use with said first image pickup device is a fisheye lens.

Claim 9 (Withdrawn): A camera control system comprising:

a convex mirror for reflecting object light incident thereon; and

image pickup means for picking up the object light reflected from said convex mirror, to output a moving image,

wherein said convex mirror is constructed such that a surface thereof has a fovea-centralis-like configuration in which a central portion of the surface is formed as a low-curvature surface and a peripheral portion of the surface is formed as a high-curvature surface.

Claim 10 (Withdrawn): A camera control system according to claim 9, wherein said convex mirror has a curved surface made by, when a center axis of said convex mirror is taken as Y axis, rotating a curve expressed by $Y = aX^4$ (a: constant) around the Y axis.

Claim 11 (Withdrawn): A camera control system according to claim 9, further comprising:

image processing means for removing distortion of a peripheral portion of the moving image outputted from said image pickup means; and

display means for displaying the moving image processed by said image processing

means.

Claim 12 (Currently amended): A camera control method comprising the steps of:

~~picking up an image of an object~~ generating frame images within a predetermined fixed area by using a first image pickup means device through a wide-angle lens having distortion, ~~to output a moving image which is generated within a predetermined fixed area consecutively in a first interval;~~

performing projective transformation processing to correct distortion of the ~~moving image outputted from~~ frame images generated by using said first image pickup means device;

~~outputting a moving image~~ generating frame images by using a second image pickup means device having no distortion consecutively in a second interval which is shorter than the first interval;

displaying the processed ~~moving image~~ frame images, and superimposing and displaying, on the displayed ~~moving image~~ frame images, a rectangular frame indicative of an image-pickup area of said second image pickup means device, and displaying the ~~moving image~~ frame images from said second image pickup means device together with the processed ~~moving image~~ frame images and the rectangular frame;

designating a desired rectangular area within the ~~displayed moving image~~ the frame images;

controlling at least one of panning, tilting and zooming of said second image pickup means device in such a way as to pick up an image corresponding to the designated rectangular area; and

wherein, said generating step generates a frame image ~~included in the processed moving image~~ of the first image pickup means device to be displayed ~~is generated~~

independently of the first interval, in response that the desired rectangular area is designated
said controlling step completes the control in accordance with the designation.

Claim 13 (Currently amended): A camera control method according to claim 12, wherein the processed ~~moving image~~ frame images and the ~~moving image~~ frame images outputted from said second image pickup ~~means~~ device are displayed on a common screen.

Claim 14 (Currently amended): A camera control method according to claim 12, wherein a position and a size of the displayed rectangular frame are determined on the basis of a parameter outputted from said second image pickup ~~means~~ device.

Claim 15 (Canceled).

Claim 16 (Currently amended): A camera control method according to claim 12, wherein said first image pickup ~~means~~ device includes a plurality of image pickup ~~means~~ devices, and ~~moving images~~ groups of frame images outputted from said plurality of image pickup ~~means~~ devices are processed and combined into one ~~moving image~~ group of frame images.

Claim 17 (Currently amended): A camera control method according to claim 12, further comprising the ~~step~~ steps of:

making object light incident on an optical member; and

splitting the object light coming through said optical member into two light beams and

making the two split light beams incident on said first image pickup ~~means~~ device and said second image pickup ~~means~~ device, respectively, so that image-pickup optical axes of said first image pickup ~~means~~ device and said second image pickup ~~means~~ device coincide with each other.

Claim 18 (Currently amended): A camera control method according to claim 12, wherein said projective transformation processing includes an affine transformation which is executed on

the basis of information on an image-pickup direction of said first image pickup ~~means~~ device.

Claim 19 (Currently amended): A camera control method according to claim 12, wherein said wide-angle lens having distortion for use with said first image pickup ~~means~~ device is a fisheye lens.

Claim 20 (Currently amended): A storage medium which stores therein a program for executing a process of controlling a camera control system, said process comprising:

~~pick up an image of an object by using first image pickup means through a wide-angle lens having distortion, to output a moving image which is generated~~ generating frame images within a predetermined fixed area by using a first image pickup device through a wide-angle lens having distortion consecutively in a first interval;

~~performing projective transformation processing to correct distortion of the moving image outputted from~~ frame image generated by using said first image pickup means device;

~~outputting a moving image by using second image pickup means having no distortion;~~

generating frame images by using a second image pickup device having no distortion consecutively in a second interval which is shorter than the first interval;

~~displaying the processed moving image~~ framed images, and superimposing and displaying, on the displayed ~~moving image~~ framed images, a rectangular frame indicative of an image-pickup area of said second image pickup ~~means~~ device, and displaying the ~~moving image~~ framed images from said second image pickup ~~means~~ device together with the processed moving image and the rectangular frame;

~~designating a desired rectangular area within the displayed moving image~~ the frame images;

controlling at least one of panning, tilting and zooming of said second image pickup ~~means~~ device in such a way as to pick up an image corresponding to the designated rectangular area; and

wherein, said generating process generates a frame image included in the processed moving image of the first image pickup means device to be displayed is generated independently of the first interval, in response that ~~the desired rectangular area is designated~~ said controlling process completes the control in accordance with the designation.

Claim 21: (New) A camera control system comprising:

a first image pickup device which generates first frame images within a predetermined fixed area consecutively in a first interval and outputs the first frame images;

a second image pickup device which generates second frame images consecutively in a second interval which is shorter than the first interval and outputs the second frame images;

a display device which displays the first frame images outputted by said first image pickup device, and which superimposes and displays, on the first frame images, a rectangular frame indicative of an image-pickup area of said second image pickup device, and displays the second frame images from said second image pickup device together with the first frame images and the rectangular frame;

a designating device which designates a desired rectangular area within the first frame images displayed by said display device;

a control device which controls at least one of panning, tilting and zooming of said second image pickup device in such a way as to pick up an image corresponding to the rectangular area designated by said designating device and;

wherein, the first image pickup device generates a frame image to be displayed by said display device independently of the first interval, in response that said control device completes the control of said second image pickup device in accordance with the designation by said designating device.

Claim 22 (New): A camera control system according to claim 21, wherein said display device displays, on a common screen, the first frame images and the second frame images.

Claim 23 (New): A camera control system according to claim 21, wherein a position and a size of the displayed rectangular frame are determined on the basis of a parameter outputted from said second image pickup device.

Claim 24 (New): A camera control system according to claim 21, wherein said first image pickup device includes a plurality of image pickup devices, and said image processing device processes and combines groups of frame images outputted from said plurality of image pickup devices into one group of frame images.

Claim 25 (New): A camera control method comprising the steps of:

generating first frame images within a predetermined fixed area by using a first image pickup device consecutively in a first interval;

generating second frame images by using a second image pickup device consecutively in a second interval which is shorter than the first interval;

displaying the first frame images, and superimposing and displaying, on the first frame images, a rectangular frame indicative of an image-pickup area of said second image pickup device, and displaying the second frame images from said second image pickup device together with the first frame images and the rectangular frame;

designating a desired rectangular area within the first frame images;

controlling at least one of panning, tilting and zooming of said second image pickup device in such a way as to pick up an image corresponding to the rectangular area and;

wherein, said generating step generates a frame image to be displayed independently of the first interval, in response that said controlling step completes the control of said second image pickup device in accordance with the designation.

Claim 26 (New): A camera control method according to claim 25, wherein the first frame images and the second frame images are displayed on a common screen.

Claim 27 (New): A camera control method according to claim 25, wherein a position and a size of the displayed rectangular frame are determined on the basis of a parameter outputted from said second image pickup device.

Claim 28 (New): A camera control method according to claim 25, wherein said first image pickup device includes a plurality of image pickup devices, and groups of frame images outputted from said plurality of image pickup devices are processed and combined into one group of frame images.